

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1-17 (Cancelled)

18 (Currently Amended) ~~The system of claim 17;~~ A system for RF gain control comprising:

a receiver for receiving a RF signal;

a signal-sampling device, coupled to the receiver, for retrieving a signal strength information from the RF signal;

a noise-sampling device, coupled to the receiver, for retrieving a noise information from the RF signal; and

an operation unit, coupled to the receiver, the signal-sampling device and the noise-sampling device, for generating a feedback control signal according to the signal strength and noise information, wherein the operation unit provides the feedback control signal to the receiver to adjust a gain value thereof;

a detector, coupled to the receiver, for detecting a time interval between two contiguous frames in the RF signal and for generating a detection information; and

a first processor, coupled to the detector and the noise-sampling device, for generating a noise-sampling instruction according to the detection information to retrieve the noise information from the RF signal;

wherein the feedback control signal is selected from a group consisting of a value of the signal strength function, a value of the noise level function, a sum of the signal strength function and the noise level function, and a larger of the signal strength function and the noise level function; and

wherein the value of the signal strength function, the value of the noise level function, the sum of the signal strength function and the noise level function, and

the larger of the signal strength function and the noise level function are obtained from a predetermined algorithm that the signal strength information and the noise information are subtracted by a first and a second predetermined thresholds respectively, and then multiplied by a first and a second predetermined transfer functions to generate the signal strength function and the noise level function respectively.

19 (Cancelled)

20. (Previously Presented) A system for RF gain control comprising:

- a receiver for receiving a RF signal;

- a signal-sampling device, coupled to the receiver, for retrieving a signal strength information from the RF signal;

- a noise-sampling device, coupled to the receiver, for retrieving a noise information from the RF signal;

- an operating unit, coupled to the receiver, the signal-sampling device and the noise-sampling device, for generating a feedback control signal according to the signal strength and noise information, wherein the operation unit provides the feedback control signal to the receiver to adjust a gain value thereof, wherein the feedback control signal is obtained by that the signal strength information and the noise information are subtracted by a first and a second predetermined thresholds respectively, and then multiplied by a first and a second predetermined transfer functions to generate a signal strength function and a noise level function respectively to output the feedback control signal according to a predetermined algorithm;

- a detector, coupled to the receiver, for detecting a time interval between two contiguous frames in RF signal and for generating a detection information; and

- a first processor, coupled to the detector and the noise-sampling device, for generating a noise-sampling instruction according to the detection information to retrieve the noise information from the RF signal.

21. (Previously Presented) A system for RF gain control comprising:

a receiver for receiving a RF signal;

a signal-sampling device, coupled to the receiver, for retrieving a signal strength information from the RF signal;

an operating unit, coupled to the receiver, the signal-sampling device and the noise-sampling device, for generating a feedback control signal according to the signal strength and noise information, wherein the operation unit provides the feedback control signal to the receiver to adjust a gain value thereof, wherein the feedback control signal is obtained by that the signal strength information and the noise information are subtracted by a first and a second predetermined thresholds respectively, and then multiplied by a first and a second predetermined transfer functions to generate a signal strength function and a noise level function respectively to output the feedback control signal according to a predetermined algorithm.

22. (Previously Presented) A method for gain control comprising:

receiving a RF signal;

retrieving a signal strength information from the RF signal;

retrieving a noise information from the RF signal; and

adjusting a gain value according to the signal strength and noise informations, wherein the noise information is retrieved from a short inter-frame space in the RF signal, wherein the gain value is adjusted by a feedback control signal which is obtained by that the signal strength information and the noise information are subtracted by a first and a second predetermined thresholds respectively, and then multiplied by a first and a second predetermined transfer functions to generate a signal strength function and a noise level function respectively to output the feedback control signal according to a predetermined algorithm.